

REMARKS

In accordance with the foregoing, claims 2, 6, 10-12, 16-17, and 21 are amended. No new matter is presented in any of the foregoing and, accordingly, approval and entry of the amended claims are respectfully requested.

Claims 1-2, 4-6, 8-17, and 21 are pending and under consideration.

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Claim Amendments

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Claim 2 is amended to recite a system "wherein a throughput of data of the client is changed corresponding to a priority of the client." Claims 6, 10-11, 16-17, and 21 are similarly amended. Support for the amendment is found, for example, in page 30, line 21 to page 32, line 14.

Claim 12 is amended to recite a method including "forming a virtual tunnel having a multiplexing protocol, where a size of a data transfer window in a transport protocol sent within the multiplexing protocol is increased and a connection with the increased window size in the transport protocol can be used continuously, for hiding a network delay that takes place between a server and a client; determining a validity of a client to use the virtual tunnel for a connection; upon the client being validated, continuously using the virtual tunnel as a communication bypass between the server and the validated client so as to increase a throughput between the server and the client, and upon the client not being validated, using another connection for communication."

No new matter is presented in any of the foregoing and, accordingly, approval and entry of the amended claims are respectfully requested.

**OVERCOMING REJECTION OF CLAIMS 1-2, 4-6, 8-17 and 21 UNDER 35 U.S.C. §112,
SECOND PARAGRAPH**

In items 8-14 of the Office Action, the Examiner rejects claims 1-2, 4-6, 8-17 and 21 under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner asserts, using claim 2 as an example:

the limitation "converting a first protocol at an application layer level for data transmitted from the client to the server into a second protocol at the application layer level" is unclear. It is unclear if Applicant is referring to the well-known application layer of the OSI model or some other "application layer level". The Examiner recommends that the claims be amended to recite "a first application layer protocol" or a similar recitation to clarify that the protocols are protocols of the well-known application layer.

(Action at pages 3-4).

Applicant respectfully submits that even before the current amendment claims 1-2, 4-6,

8-17 and 21 comply with 35 U.S.C. §112, second paragraph, i.e., are definite and are clear regarding the feature of "converting a first protocol at an application layer level, for data transmitted from the client to the server, into a second protocol at the application layer level."

Applicant respectfully points out to the Examiner that as set forth in MPEP §2111 claims of patents are interpreted in light of the specification. Further, as set forth in MPEP §2111:

The specification should also be relied on for more than just explicit lexicography or clear disavowal of claim scope to determine the meaning of a claim term when applicant acts as his or her own lexicographer; the meaning of a particular claim term may be defined by implication, that is, according to the usage of the term in >the< context in the specification.

Applicant further points out that a meaning for a phrase such as "application layer level" that is recited in a claim is according to usage based on the phrase's context within the claim and the specification.

Applicant also respectfully points out to the Examiner that the phrase "first application layer protocol" suggested by the Examiner could, instead, be viewed as indefinite since the claims would be rendered more vague than the current recitation.

That is, the Examiner's suggested phrase "first application layer protocol" could be interpreted as either: 1) a protocol of a first application layer or 2) a first protocol of an application layer. The OSI model referred to by the Examiner does not apply and Applicant submits that network models are understood in the art as TCP/IP models. In the TCP/IP model, protocols are defined with four layers" link layer (Ethernet, etc.), network layer (IP protocol), Transport layer (TCP and UDP), and application layer (HTTP, FTP, and TELNET, etc.. (See, for example, http://en.wikipedia.org/wiki/TCP/IP_model).

Summary

Applicant submits that claims 1, 2, 4-11, and 15-17 comply with 35 U.S.C. §112, second paragraph and request withdrawal of the rejection.

TRAVERSE OF REJECTIONS UNDER 35 U.S.C. §102(e) AND 35 U.S.C. §103(a)

Items 10-15 and 19-23: Rejection of claims 1, 2, 4-6, 9-11, 15-17, and 21

In items 10-15 of the Office Action, the Examiner rejects independent claims 2, 6, 10, 11, 16, 17 and 21 under 35 U.S.C. §102(e) as being anticipated by Sridhar et al. (U.S.P. 6,266,701).

In items 19-23 of the Office Action, the Examiner rejects dependent claims 1, 4, 5, 9, and 15 under 35 U.S.C. §103(a) as being unpatentable over Sridhar in view of combinations of Toporek et al. (U.S.P. 6,460,085) and Kirkby et al. (U.S.P. 6,671,285).

The rejections are traversed.

Applicants submit that the cited art, alone or in combination, does not teach, features recited by each of the independent claims. As an example, claim 2, as amended herein, recites a system communication between a server and a client including:

(1) "converting a first protocol at an application layer level, for data transmitted from the client to the server, into a second protocol at the application layer level, the second protocol allowing an increase of a size of a data transfer window;" and

(2) "converting the first protocol of the data received by the second receiving module into the second protocol;" and

(3) "multiplexing data of multiple connections converted by said second converting device so that a connection using the increased window size in the transport layer protocol level can be used continuously and the larger amount of data can be transmitted;" (that is the increase can be for bidirectional communications) and

(4) "wherein a throughput of data of the client is changed corresponding to a priority of the client (emphasis added)." Independent claims 6, 10, 11, 16, 17 and 21, all as amended herein, have similar recitations.

None of the cited art teach, alone or in combination, teach that such a throughput of data of the client is changed corresponding to a priority of the client.

Further, dependent claims recite features that patentably distinguish over the art. Dependent claim 4 recites a communicating system including "an idling device performing an idling operation corresponding to a resource assigned to the client, wherein said transmitting device transmits data after the idling operation is completed."

In rejecting dependent claim 4, the Action concedes that Sridhar does not teach "an idling device." (Action at pages 11-12). However, the Examiner contends that

Toporek discloses a similar system in which data transfer is accelerated across an XTP connection. Toporek teaches the use of a rate control module which determines whether to send data across the satellite link immediately, or to buffer it and deliver it at a later time . . . This would have been an advantageous addition to the system disclosed by Sridhar since it would have allowed the gateway to control the rate of transmission of data across the link, controlling congestion.

(Action at page 11).

Applicants respectfully point out to the Examiner that Toporek discusses instead:

A rate control module 234 determines whether the information can be passed

immediately to the satellite connection or be queued for later delivery.
(col. 10, lines 60-65).

That is, a control based on the priority of the client is not taught by Toporek, or an *arguendo* modification of Sridhar in view of Toporek.

Summary

Since features recited by claims 1-2, 4-6, 9-11, 15-17, and 21 are not taught by the cited art, alone or in combination, the rejections should be withdrawn and claims 1-2, 4-6, 9-11, 15-17, and 21 allowed.

Items 16 and 25: Rejection of claims 12-14

In item 16 of the Office Action, the Examiner rejects independent claim 12 under 35 U.S.C. §102(e) as being anticipated by Toporek. In item 25, the Examiner rejects dependent claims 13 and 14 under 35 U.S.C. §103(a) as being unpatentable over Toporek in view of Kirkby et al. (U.S. 6,671,285).

The rejections are traversed.

Independent claim 12, as amended herein recites a communicating method including "forming a virtual tunnel having a multiplexing protocol, where a size of a data transfer window in a transport protocol sent within the multiplexing protocol is increased and a connection with a-the increased window size in the transport protocol can be used continuously, for hiding a network delay that takes place between a server and a client; determining a validity of a client to use the virtual tunnel for a connection; upon the client being validated, continuously using the virtual tunnel as a communication bypass between the server and the validated client so as to increase a throughput between the server and the client, and upon the client not being validated, using another connection for communication.(emphasis added)."

Applicants submit that the cited art, alone or in combination does not teach such a recited method in which a window size is increased for a validated client, but not increased for other clients.

Rather, Toporek teaches:

(t)he present system allowed the client to take advantage of the available bandwidth regardless of the window size of the client or server.

(col. 17, lines 49-52)

That is, Toporek teaches away from having different window sizes based on a validation of type of client.

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Summary

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Since features recited by claims 12-14 are not discussed by the cited art, alone or in combination, and *prima facie* obviousness is not established, the rejection should be withdrawn and claims allowed.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

If there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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